Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Stephen A. Owens
Director

HAZARDOUS AIR POLLUTANTS RULE STAKEHOLDER MEETING SUMMARY

DATE: **August 24, 2005**
TIME: **9:30 a.m.**
LOCATION: **ASU Downtown Center, C368-370**
502 E. Monroe Street, Phoenix, Arizona

PUBLIC ATTENDEES
(See attached)

ADEQ STAFF
Nancy Wrona
Diane Arnst
Ira Domsky
Kevin Force
David Lillie
Corky Martinkovic
Eric Massey
Steve Peplau

ADDITIONAL ATTENDEES
Kelly Cairo, Gunn Communications
Pat Clymer, Weston Solutions
Kevin Eldridge, Weston Solutions
Theresa Gunn, Gunn Communications
Gary Lage, Weston Solutions
Steve Mauch, Weston Solutions
Teresa Verstraet, Weston Solutions

AGENDA
- Opening Remarks
- Introductions and Meeting Overview
- Presentation of Determination of De Minimis Levels
- Stakeholder Discussion
- Additional Stakeholder Comments
- Next Steps
- Adjourn

OPENING REMARKS
Nancy Wrona thanked stakeholders for attending and for their participation in the Hazardous Air Pollutants (HAPs) rulemaking process. She relayed regrets from Steve Burr, who was unable to attend the meeting.

INTRODUCTIONS AND MEETING OVERVIEW
Meeting facilitator Theresa Gunn called for introductions and reviewed guidelines for holding a good meeting. She explained that all comments or questions recorded on index cards would be posted on boards until the stakeholder determines the issue has been addressed and the card may

be removed.

PRESENTATION OF DETERMINATION OF DE MINIMIS LEVELS AND STAKEHOLDER DISCUSSION

Ira Domsky introduced the de minimis presentation. De minimis refers to the level of emissions below which these regulatory requirements would not apply. A potential to emit (PTE) above the de minimis would be significant, and subject the source to the HAPs rule. He reviewed the statutory language, found in § 49-426.06.

Stakeholder questions and comments included:

- The statutory language refers to establishing de minimis for HAPs that are not federally listed. To go beyond this language exceeds statutory authority. **Response**: This language was predicated under the assumption that EPA would develop a list. We are plugging that gap.
- ADEQ does not have the statutory authority to develop de minimis for federal HAPs. **Response**: If the EPA administrator has done nothing, we believe the authority is implied.
- This is a statutory flaw that must be addressed. There should be an Attorney General's Office opinion on this issue.
- This is a valid analysis, and there should be a formal response.
- The issue must be addressed, because county governments are required to adopt programs based on the authority granted under A.R.S. §49-426.06.
- I am skeptical that this process will protect Arizonans. I am concerned we will end up with a lousy rule that is inadequate in protecting people.
- There are checks and balances, and ADEQ may have to go back to the Legislature.

Gunn asked the group if the balance of the de minimis presentation would be appropriate for stakeholder discussion, given that at some point in the future, ADEQ may add state HAPs, and issue could receive further examination and follow up.

Stakeholder questions and comments included:

- If we proceed with the proposed rulemaking, the de minimis for federally listed HAPs should be "0."
- This group could be used in a stakeholder process to determine statutory changes. This was done last session with solid waste. **Response**: This is not the purpose of this stakeholder process.

Steve Mauch, Weston Solutions, presented the remainder of the determination of de minimis levels information. The presentation is available on the ADEQ website at www.azdeq.gov/function/laws/draft.html#haps. Highlights included:

- Air dispersion modeling uses the USEPA SCREEN3 model, and assumptions include a facility with worst-case emission dispersion characteristics.
- Modeling options represent typically used values wherever possible.
- De minimis calculations of 1 gram/second are selected because the emissions increase is in direct proportion to the increase in grams per second.

- The de minimis levels table in the report includes 73 HAPs, which are all of the federally identified HAPs emitted by Arizona facilities with at least one ton per year (tpy) for a single HAP or 2.5 tpy for all HAPs.

Gunn asked stakeholders to identify issues and concerns. (The issues listed below in italics are verbatim from cards submitted by the stakeholders.) Stakeholder questions and comments included:

- The labels are reversed on the emission rate converted to English units. *1 g/s = 7.92 lb/hr, not 0.126. Reciprocal is 0.126 so by dividing equation is correct.* **Response**: The last bullet of the long–term calculation should read one pound/hour = .126 g/s. The table values were calculated correctly, the error appears only in this slide.
- At what distance did the maximum concentration appear? *Where was the maximum concentration? At how many meters from stack?* **Response**: Less than 15 meters.
- In South Phoenix, there are two sources emitting styrene. If each had elevated emissions but remained under the de minimis, there would be a cumulative impact. This is an underlying problem.
- Why is the de minimis modeling is different than the modeling used in HAPRACT? **Response**: Weston will review this issue with ADEQ.
- Why are we looking at a de minimis calculation with a generic point source, yet this is not part of the modeling? **Response**: Weston will review this issue with ADEQ. The statute requires the agency to consider existing sources that will be making future modifications which are unknown at this point.
- If we apply a de minimis point source analysis to NAAQS, a facility couldn't emit more than .03 pounds/hour of PM_{10}, as an example. There isn't a facility out there for which this makes any reasonable sense, and any source will flunk this test. **Response**: The proposed rule isn't an emissions regulation and doesn't set a limit. This determines the need for control technology.
- There should be some relationship between how a typical source functions. **Response**: The majority of HAPs sources are not combustion-related.
- The sources that do emit PM_{10} couldn't comply with NAAQS. **Response**: If the potential to emit based on the modification is shown to be below the de minimis, the facility is done. The permit application has to address actual public health impact. This is the reality we address.
- How sensitive are the results to the levels. **Response**: This is a very sensitive process. The first level of screening acts as the gatekeeper. If the value is above this level, then the source needs further attention.
- With the table values set as low as they are, practically all sources will need to go on to the second level.
- *Certain de minimis value emission rates are so extremely small that readily available information such as MSDS data is (sic) inadequate to determine an exceedance of the de minimis value.*
- Regarding the northwest corridor of Phoenix, this would only address the single sources. What about the cumulative impacts? **Response**: The statute does not provide for a means to consider cumulative impacts. ADEQ considers cumulative impacts a serious problem, and is addressing this issue outside this stakeholder process, in part with the three counties.

- A generic source is modeled; does this method also apply to a fugitive point source – one that is not a stack? **Response**: This is a source category question. If a source category is listed, we would need to take into account both stack and fugitive emissions.
- Will the determination of de minimis levels be adopted in rule? **Response**: Yes.
- The de minimis level of naphthalene shown on page 3-3 of the report is so minute that a stationary source would not be able to determine such a level.
- How can such a small level of arsenic be measured, particularly from an area source?
- In comparison to arsenic, the de minimis level for beryllium seems quite high. **Response**: The chronic table doesn't show big differences because both are considered toxic inhalation levels.
- Would an individual source use SCREEN3? **Response**: The RMA would be required to include a demonstration using an appropriate method.
- The levels for metal compounds are not measurable in this context.
- The mercury level is inappropriate at 1.9 pounds/year. Other metals are much lower.
- Why not simplify and establish the de minimis at zero? This is easy to understand, and any modification would put the source under the rule and (the option of) an RMA.
- Would PM emissions from natural sources be excluded in the case of crushing, screening and mining? **Response**: Yes, these would be excluded. Additionally, the issue of measurement is not relevant. De minimis is only used to calculate potential to emit.
- I want an Attorney General's Office opinion on whether ADEQ has to look at cumulative impacts. *Cumulative impacts must be examined Title VI – Civil Rights Issues.*
- I disagree that measurement is not a factor. During the permit application, a facility has to prove – or measure – the level of emissions. **Response**: PTE is an engineering calculation, not a measurement procedure. It is used to determine that a source needs further analysis. A control technology may then be applied, or an RMA can occur.
- Would de minimis be used for the potential to emit of the increase? **Response**: Yes.
- MSDS is used to determine PTE; however, MSDS is not accurate enough to calculate these types of de minimis calculations. Therefore, measurements would be required. **Response**: This is an engineering calculation. The facility would begin at the MSDS calculation, before proceeding to an RMA. Also, components are not required to be listed on an MSDS, but could still trigger these thresholds.
- What is the justification for using PTE versus actual emissions? **Response**: PTE includes any inherent limitations to emit, and ends up looking more like actual emissions.
- Electric utilities have an actual to actual emissions comparison, consistent with the WEPCO decision and the NSR reform package. The definition of modification in the rule says "increases in actual emissions."
- I suggest using care, and the best scientific approach, when addressing families of compounds. For example, arsene is a gas, and arsenic is a particle. A different modeling approach would have to be used for tracking other sources. **Response**: The federal HAPs list limits us to "arsenic compounds."
- Without seeing the source categories list, I am concerned about existing sources with PTE > 1 tpy, but actual emissions < 1 tpy – particularly if these facilities move from five to seven days per week operating schedule.

- It looks like the chronic values are related to the edge of the property line. **Response**: This is more a modeling issue regarding where exposure occurs. This will be a fair question for a particular facility. We are developing rules for sources in general that have a potential to have an adverse effect to the public.
- Would the RMA address the issue of the process area boundary? **Response**: The RMA would determine the actual maximum concentration level. The point at which ambient air begins is also determined on a source-by-source basis.
- What are the assumptions on exit temperature? 68 degrees F seems conservative. **Response**: For a capped vent source, this seemed an appropriate level. The analysis relies on the same default temperatures for ambient air and for exit temperature
- Is de minimis addressed for fugitive as well as stack sources? For certain categories, fugitive levels might be worse than stack. **Response**: We will come back to this issue.
- I think you should check into the statutory authority to determine de minimis for area sources.
- If EPA adds HAPs to the federal list, will they automatically be part of the Arizona rule? **Response**: No, the rule would have to be updated.
- What are the sources of reference concentrations? **Response**: These are detailed in the acute and chronic concentration documents on the ADEQ website.
- *What are all the intended uses of AACs by ADEQ beyond source category listing, and HAPRACT and de minimis determinations?* **Response**: These are the only uses.
- *Clustering of operations should be in the forefront. Sun City – 40,000 retired folks. Sun City West – 30,000 retired folks. 21 mining locations from Grand to Jomax. Sun City West has the highest lung cancer ZIP code in the state.*
- *Under what conditions will ADEQ re-evaluate or allow an outside party to re-evaluate the scientific basis of an AAC?* **Response**: The information is available on the website. Anyone is free to reevaluate it. The contractor we are using in this development process uses a quality assurance process. We are very interested in any comments.
- Can the AACs be reevaluated during the RMA process? **Response**: We will address this issue in addressing other RMA-related issues.
- *Request ADEQ meeting to address HAPRACT implementation.*
- *Will a meeting be added to discuss the risk management analysis that ADEQ will required in a large number of cases?*

Gunn asked the stakeholders if an RMA meeting should be held. The meeting could include issues such as cost, feasibility, public review of RMA, and would every source listed need to perform an RMA. There was general agreement among stakeholders that an RMA meeting should be held.

Additional stakeholder questions and comments included:

- *A permit applicant must perform <u>two</u> modeling exercises: 1) SCREEN3 to determine if its emissions will be above de minimis; and then, 2) a more complex model in an RMA demonstration to show that HAPRACT should not apply. Correct?* **Response**: We will address this issue in addressing other RMA-related issues.
- *How can AACs below background levels cause serious irreversible effects?*
- *Why are some chronic AACs based on highly uncertain high-dose rodent data when a wealth of human data are available at low doses (e.g. formaldehyde)?*

- *In some cases, why were AACs based on oral exposure studies, even when more accurate values based on inhalation studies are available (e.g. TCE)?*
- *What is statutory authority for ADEQ to adopt de minimis for federal HAPs?* **Response**: We will discuss this further at a later time.
- *Are there additional requirements contemplated if the AAC is exceeded even after HAPRACT is installed?* **Response**: No.
- *If authorities other than §49-426.06 are used to adopt de minimis for federal HAPs, how does this impact counties with respect to §49-480.04?* **Response**: We will follow up on this.
- *Issue with determining baseline for existing unpermitted sources who have a modification that exceeds de minimis.*
- *The listed de minimis levels are extremely low and not quantifiable.*
- *It seems that the SCREEN3 modeling assumed a given concentration per cubic meter, i.e. styrene 564lbs/cm^3. The methodology called to convert this to lb/hr appears to assume the given source emits to one single cubic meter instead of being realistic.* **Response**: The model and SCREEN3 do not make that assumption.
- *Important to err on the side of caution when establishing de minimis levels – overarching goal is protection of public from toxic chemicals. Levels should be low or zero and modeling should be conservative to ensure people aren't harmed or injured.*
- *Is it possible for a source to determine individual de minimis levels based on the AACs and the source's specific conditions?* **Response**: We will address this issue in addressing other RMA-related issues.
- *In a 1994 "trial balloon" draft (Jan. 7, 1994 letter from N. Wrona to R. Ferland), ADEQ suggested a very different approach to defining de minimis. Is ADEQ willing to consider its own 1994 trial balloon draft for determining de minimis levels?* If methods used in the past weren't useful, we wouldn't look at the ACCs. However, this was a valuable process as well. **Response**: The reason for this stakeholder process is to field ideas and make sure this is a rational method. We are always open and obligated to look for good public policy.
- *A permit application is <u>only</u> required if there's a modification and HAPRACT is determined to apply, correct? Is ADEQ concurrence required if source determines it's not subject to HAPRACT?* **Response**: This issue will be addressed in rule language.
- *The definition of "mod" is nearly identical to the NSR and NSPS definition of mod. Will ADEQ use EPA's existing body of policy and guidance documents on the meaning of this term? For example, EPA has guidance on whether certain changes constitute a change in method of operation. Will ADEQ follow these? Also, will ADEQ adopt the exemptions from the NSR definition of mod (i.e. increased hours of operation, etc.)?* How will regulated entities know what will be included? This may lead to a state of perpetual "RMA-ness." **Response**: More work needs to be done here. If no one knows what the standards are, there could be a state of continual violation. We would need an NSR analogy, and it is our responsibility to identify this information.
- Will the rule be crafted to incorporate future EPA listings? **Response**: No, state law must be based upon an existing standard.
- *Ethylene glycol mono-butyl ether has been de-listed as a HAP in the glycol ether category. MEK may soon be de-listed.* I would hope these changes get incorporated in the new rule.

- *Taking HAPs issue to the Legislature is just plain crazy.*
- *De minimis levels, where only an annual level is shown, are difficult or impossible to measure for many of the chemicals listed in Table 3-1.*
- *De minimis. Readily available product information (MSDS) does not provide constituent concentrations accurately enough to calculate compliance with proposed, extremely low, de minimis levels. PTE calculation, to the degree necessary, would not be possible.*
- *Will the rule account for contemporary emissions increases and decreases? If yes, will there be a look-back period defined in rule, similar to NSR?*
- *How will HAPRACT be defined? In rule, or case-by-case?* **Response**: Case-by case.
- *What is the scientific justification for using a risk level as low as one in a million to define chronic air levels above which serious irreversible effects will occur?*
- *Significant figures in de minimis column – way too many!*
- *ADEQ appears to be proposing an actuals-to-potentials test for determining HAPs emissions increases in the context of modifications. Utilities haven't been subject to this test since the early '90s and instead are subject to an actuals-to-actuals test. Moreover, EPA itself recently extended the actuals-to-actuals test to all regulated entities. The use of actuals-to-potentials will capture almost every modification. What is ADEQ's rationale, and isn't an actuals-to-actuals test more appropriate and consistent with EPA's policy? ARS §49-401.01 defines "mod" in terms of actual.*
- *How will ADEQ determine whether a source must use HAPRACT when ADEQ AACs show "x" number, and a source AACs from RMA show lower numbers? Whose number will be used for determining the source doing HAPRACT?*
- *If an AAC is based on the toxicity of a worst-case surrogate chemical, will this AAC be compared to the sum of modeled concentrations for all chemicals in this class?*

Gunn asked the group their opinion of the methodology for determining de minimis. Most did not support the methodology, and some were uncertain. Stakeholder comments included:

- This process seems to sum up the concerns of industry, however, I believe the de minimis should be at "0" to make it most conservative.
- There should be data on how this will impact sources. There may be controls required on tiny amounts of emissions.
- The de minimis proposal is based on modeling and the AACs. The stringency of the AACs is also a concern in this process.

ADDITIONAL STAKEHOLDER COMMENTS

Due to time constraints, this agenda item will be addressed at the next meeting.

NEXT STEPS

Those who wish to provide comments prior to the next meeting should address written comments to Steve Burr.

Gunn provided information on the next meeting, which is scheduled for September 14, 9:30 a.m. at ASU Downtown Center, in Building A. Related materials will be available prior to the meeting at the ADEQ website: http://www.azdeq.gov/function/laws/draft.html#haps.

ACTION ITEMS

- Joe Mikitish will work with ADEQ to address the issues raised regarding statutory authority to develop de minimis levels for federal HAPs. He was also asked to address:
  - Whether ADEQ has to look at cumulative impacts;
  - Whether ADEQ has statutory authority to determine de minimis for area sources;
  - Whether ADEQ has statutory authority to adopt de minimis for federal HAPs.

- Issues for Weston/ADEQ review:
  - Why is the de minimis modeling is different than the modeling used in HAPRACT?
  - Why are we looking at a de minimis calculation with a generic point source, yet this is not part of the modeling?

- Discuss offering a meeting on risk management assessment.

- Determine how if authorities other than §49-426.06 are used to adopt de minimis for federal HAPs, how this impacts counties with respect to §49-480.04?

HAZARDOUS AIR POLLUTANTS RULE
STAKEHOLDER MEETING SUMMARY
August 24, 2005

PUBLIC ATTENDEES

Christopher Andrews, Andrews Environmental Mgmt.
Sandy Bahr, Sierra Club Grand Canyon Chapter
Ed Barry, Chemical Lime
Ann Becker, Pinnacle West Capital Corp
Chuck Bischoff, Jordan Bischoff McGuire & Hiser
Lisa Brautigam, Fennemore Craig PC
Steve Brittle, Don't Waste Arizona, Inc.
Al Brown, ASU Environmental Technical Management
Jo Crumbaker, Maricopa County Air Quality Dept.
Susan Culp, Arizona League of Conservation Voters
Stan Curry, Gallagher & Kennedy
Cosimo DeMasi, Tucson Electric Power
Scott Dibiase, Pinal Air Quality
Jerry Dumas, Raytheon Missile Systems
Ken Evans, Phelps Dodge Corporation
Joe Gibbs, City of Phoenix
Richard Grimaldi, Pima County DEQ
Troy Hacker, Thermo Fluids Inc.
Larry Hawke, Pima County DEQ
Brad Hensey, Phoenix Cement Co.
Tim Higgs, Intel Corporation
Sharyn M. Holden, Raytheon Missile Systems
Johanna M. Kuspert, Maricopa County Air Quality Dept.
Doug Lavarnwal, APS
Rollie Leeman, Intel
Wayne Leipold, Phelps Dodge Miami
David Lima, Hexcel
Jeremy A. Lite, Quarles & Brady Streich Lang LLP
David Mack, Granite Construction Co.
Eran Mahrer, APS/PNW
Jenn McCall, Freescale Semiconductor
Amanda McGennis, Arizona Chapter Associated General Contractors
Frank Mendola, CEMEX
Joe Mikitish, Attorney General's Office
Jim Mikula, APS
Nancy Nesky, ITSI
Pam Norris, SCA Tissue
Krishna Parameswaraw, ASARCO LLC
Anu Pundari, El Paso Natural Gas
Todd Rallison, Intel Corporation
Lily Regis, Arizona Electric Power Cooperative
Pat Ryan, Ryan Environmental
Chas Spell, APS
Penny Allee Taylor, Southwest Gas
Ric Tobin, Lewis & Roca
Steve Trussell, Arizona Rock Products Assoc.
Joyce Tsuji, Exponent
Bill Underwood, Gallagher & Kennedy
Sunil Varma, SRP
Richard Wehbe, Maricopa county Mining District Com.
Kathleen Whalen, Arizona League of Conservation Voters
Linda Young, Intel
Qian (Jenny) Zhao, City of Phoenix